DST500-FM Digital RTD Thermometer System

The **DST500-FM** is an RTD system with Factory Mutual approval for measuring temperatures in hazardous areas where three basic requirements for an explosion to take place are found: a flammable substance, an oxidizer, and an ignition source. This model is intrinsically safe, limiting the energy available to be below the energy required to cause combustion of material or gas, even in a fault condition.

Wahl DST500-FM

FM C US APPROVED

FEATURES

Safety & Security

- This model is FM approved for intrinsic safety, limiting the energy available to cause combustion.

- LCD Screen with easy to read 1 inch high digits. Resolution to 1/10th of 1° below 1000°, and 1° above 1000°.

- Ambient operation from -40°F to 158°F (-40° to 70°C)

- Vibration: MIL STD 202G

- Optional 90° elbow allows Back, Left or Right Angle configuration.

- PC Board has over-current and reverse battery protection

- Hazardous Location approval by FM Approvals in US and Canada.

- Approved for:

  IS/CL I, II, III/ DIV 1 / GP ABCDEFG / T4A Ta= 70°C; Type 4X
  CL I, II, III/ DIV 2 / GP ABCDEFG /T4A Ta= 70°C; Type 4X
  CLASS 1- GASES
  CLASS 2 - DUSTS
  CLASS 3 - FIBERS

  DIV 1- FLAMMABLE MATERIAL PRESENT CONTINUOUSLY OR INTERMITTENTLY DIV 2- FLAMMABLE MATERIAL PRESENT ABNORMALLY

Safety & Security Cont…

  GROUP A - ACETYLENE
  GROUP B - HYDROGEN
  GROUP C- ETHYLENE
  GROUP D - PROPANE
  GROUP E - METAL DUST
  GROUP F - COAL DUST
  GROUP G - GRAIN DUST

- User Selectable °F or °C

- Adjustable meter update rate.[1] Powered by a FM Approved C cell sized Lithium Metal Battery.[2] Two years nominal battery life at default update rate.[3]

- Tamper resistant - Use DSTCAL, our user friendly single point calibration software (sold separately}, to set the sample and display rates.

Probes
- Fixed probes only

Enclosure
- NEMA 4X Housing

Certifications
- NIST Traceable Certificate of Conformance is available.

MADE IN THE USA

TWO YEAR 2 WARRANTY

TRACEABLE TO NIST

Palmer/Wahl
BEYOND THE SCALE

¹ Default update rate is 2 seconds unless otherwise specified at time of order. Adjustable from 0.25 seconds to 10 seconds in 0.25 second intervals.

² Unit must be used with Tadiran model TL-2200, our catalog # DSA3060, 3.6V C Cell Sized Lithium Thionyl Chloride Battery with 2.5 grams of lithium content to meet FM Approval
   requirements.

³ Low battery is indicated by "LOW BATT" displaying in the lower right corner of the display. When battery
   discharges, eventually the battery voltage will get low enough to cause an error. The display will switch to "- - -" before that happens.

DST500-FM RTD METER SPECIFICATIONS	
Model	DST500-FM
	Meter with Local Display
Meter Range	-328° to 1472°F (-200° to 800°C)
Scale	User Selectable for °F or °C
Meter Accuracy	± 0.1°F/C, over 1-year period (@ Tamb = 23°C ± 5°C)
Meter and Probe Accuracy	Greater of ± 0.4°F / 0.22°C or ± 0.5% of reading, over 1 year period (@ Tamb = 23°C)
Display	1.0" 4-digit LCD display with icons for °F, °C and Low Battery
Display Resolution	0.1°F/C; 1°F above 999.9°F
Display Update Rate	2 seconds standard, adjustable in .25 second intervals from .25 to 10 seconds
FM Approved for Hazardous Locations	IS/CL I, II, III / DIV 1 / GP ABCDEFG; T4A Ta = 70°C; Type 4X CL I, II, III / DIV 2 / GP ABCDEFG; T4A Ta = 70°C; Type 4X
Ambient Operating Environment	-40° to 158°F (-40° to 70°C), 10% to 100% RH non-condensing
Ambient Operating Coefficient	Maximum of 0.003°/°C over Ambient Operating Temperature Range from 23°C ± 5°C
Enclosure Weight / Dimensions	Stainless Steel and Polycarbonate (NEMA 4X), Weight: 2 lbs.(1kg) Dimensions: 5.3" W x 4.3" H x 2.7" D (13.5 x 10.9 x 6.9 cm).
Sensor / Probe	• Sensor - 4-wire Class A RTD, R0 = 100Ω, Alpha = .00385 Ω/Ω/°C • 304 or 316 Stainless Steel Probe construction • Fixed Stem Probes with optional 90° Elbow
Battery	1-Lithium Thionyl Chloride "C" Battery, #DSA3060 (Mfg Tadiran #TL-2200)
Battery Life	1+ year nominal at 2 second update interval. Up to 10 years if set on 10 second update rate.

Models

DST500-FM	RTD Meter, LCD, Battery Powered Display, ("C" Battery included) -328° to 1472°F (-200° to 800°C)

Meter Options

Options - If desired
Mounting Style For Back(B), Left(L) or Right Side(R) Mount specify Code B, add #13146 - 90° Elbow and specify mount
Rigid (Bottom Connected) (Remote Probes are not currently available)

Optinal Accessories

DST500-FM Series Software and Accessories	
DSTCAL	DST500-FM Series Calibration Software Kit (USB Cable, DST/USB Interface Module, and Digi-Stem Serial Interface Cable)
13500-04	DST500-FM Series Fixed Probe Calibration Cable
DST500 Series Meter Accessories and NIST Traceable Certificate of Conformance	
DSA3060	Spare Lithium Thionyl "C" Battery, (Tadiran model TL-2200) for FM meters ONLY
	Calibration and Firmware Upgrades
	NIST Traceable Certificate of Conformance of System & Firmware Upgrades*
13146X	90 Degree Elbow [3] for Rigid Stem models, Specify: Back Connection (B), Left (L) or Right Side (R) Mount**

* Upgrades if applicable, included in price.

** For Back, Left, or Right Side Mounting specify Code B, L, or R - Rigid Stem, under Mounting Style, 90 Degree Elbow accessory, and specify code as shown above.

Optional 90° elbow allows Back, Left or Right Angle configuration.

2.8" (71.1)   5.3" (134.6)   4.26" (108.2)   1.25" (31.7)   1.13" A/F (28.8)

83.1 °F

Wahl DST500FM

Palmer / Wahl
BEYOND THE SCALE